

IN THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Currently Amended) A method of encoding a multi-channel signal including at least a first signal component and a second signal component, the method comprising the steps-acts of:

[[ - ]] determining a set of filter parameters of a prediction filter such that the prediction filter provides an estimate of the second signal component when receiving the first signal component as an input;

controlling the prediction filter by an error signal indicative of a difference of the second signal component and the estimate of the second signal component; and

[[ - ]] representing the multi-channel signal as the first signal component and the set of filter parameters.

2. (Currently Amended) ~~A~~The method according to claim 1, wherein the ~~step-act~~ of determining the set of filter parameters comprises the ~~step-act~~ of determining the filter parameters such that ~~a difference of the second signal component and the estimated signal component~~ the error signal is smaller than a predetermined value.

3. (Currently Amended) ~~A~~The method according to ~~claim 2~~ claim 1, wherein the ~~step-act~~ of representing the multi-channel signal as the first signal component and the set of filter parameters further comprises the ~~step-act~~ of representing the multi-channel signal as the first signal component, the set of filter parameters, and ~~an~~ the error signal indicative of the difference of the second signal component and the estimated signal component, if said difference if the error signal is not smaller than ~~said a~~ a predetermined value.

4. (Currently Amended) ~~A~~The method according to claim 1, ~~characterised in that wherein~~ the first signal component corresponds to a first signal energy and the second signal component corresponds to a second signal energy smaller than the

first signal energy.

5. (Currently Amended) ~~A-The~~ method according to claim 1,  
~~wherein the method further comprises the step further comprising~~  
the act of transforming at least a first source signal component  
and a second source signal component of a multi-channel source  
signal into the first and second signal components.

6. (Currently Amended) ~~A-The~~ method according to claim 5,  
wherein the multi-channel source signal comprises a stereophonic  
signal including a left signal component and a right signal  
component.

7. (Currently Amended) ~~A method according to claim 1, of~~  
encoding a multi channel signal including at least a first signal  
component and a second signal component, the method comprising the  
acts of:

determining a set of filter parameters of a prediction filter  
such that the prediction filter provides an estimate of the second  
signal component when receiving the first signal component as an

input; and

representing the multi channel signal as the first signal component and the set of filter parameters; wherein

[[ - ]] said first signal component is a principal component signal of a source multi-channel signal including a number of source signal components and the second signal component is a corresponding residual signal;

[[ - ]] the method further comprises the step-act of transforming at least the first and second source signal components by a predetermined transformation into the principal component signal including most of the signal energy and at least the residual signal including less energy than the principal component signal, the predetermined transformation being parameterised parameterized by at least one transformation parameter; and

[[ - ]] the step-act of representing the multi-channel signal as the first signal component and the set of filter parameters further comprises the step-act of representing the multi-channel signal as the principal component signal, the set of filter parameters, and the at least one transformation parameter.

8. (Currently Amended) A-~~The~~ method according to claim 7,  
wherein the predetermined transformation is a rotation and the at  
least one transformation parameter corresponds to an angle of  
rotation.

9. (Currently Amended) A method ~~according to claim 1, of~~  
encoding a multi channel signal including at least a first signal  
component and a second signal component, the method comprising the  
acts of:

determining a set of filter parameters of a prediction filter  
such that the prediction filter provides an estimate of the second  
signal component when receiving the first signal component as an  
input; and

representing the multi channel signal as the first signal  
component and the set of filter parameters; wherein the ~~step-act~~ of  
determining a set of filter parameters further comprises the step  
act of determining at least one scaling parameter for scaling the  
estimate of the second signal component such that a measure of  
correlation between the second signal component and the estimate of  
the second signal component is increased.

10. (Currently Amended) A method of decoding multi-channel signal information, the method comprising the ~~steps~~ acts of:

[[ - ]] receiving a first signal component and a set of filter parameters of an adaptive filter controlled by an error signal indicative of a difference of a second signal component and an estimate of the second signal component; and

[[ - ]] estimating a ~~the~~ second signal component using a prediction filter corresponding to the received set of filter parameters, the prediction filter receiving the received first signal component as an input.

11. (Currently Amended) A method ~~according to claim 10, of~~ decoding multi-channel signal information, the method comprising the acts of:

receiving a first signal component and a set of filter parameters; and

estimating a second signal component using a prediction filter corresponding to the received set of filter parameters, the prediction filter receiving the received first signal component as

an input; wherein

[[ - ]] the ~~step-act~~ of receiving the first signal component further comprises the ~~step-act~~ of receiving a transformation parameter, the first signal component corresponding to a result of a predetermined transformation of at least a first and a second source signal component of a source multi-channel signal, the predetermined transformation being ~~parameterised~~ parameterized by at least the transformation parameter; and

[[ - ]] the method further comprises the ~~step-act~~ of generating a first and a second decoded signal component by inversely transforming the received first signal component and the estimated second signal component.

12. (Currently Amended) An arrangement for encoding a multi-channel signal including at least a first signal component and a second signal component the arrangement comprising:

[[ - ]] a prediction filter for estimating the second signal component, the prediction filter corresponding to a set of filter parameters and receiving the first signal component as an input, wherein the prediction filter is controlled by an error signal

indicative of a difference of the second signal component and an estimate of the second signal component; and

[[ - ]] processing means for representing the multi-channel signal as the first signal component and the set of filter parameters.

13. (Currently Amended) An arrangement for decoding a multi-channel signal corresponding to at least two signal components, the arrangement comprising:

[[ - ]] receiving means for receiving a first signal component of the multi-channel signal and a set of filter parameters of an adaptive filter controlled by an error signal indicative of a difference of a second signal component and an estimate of the second signal component;

[[ - ]] a prediction filter for estimating a second signal component of the multichannel signal, the prediction filter receiving the received set of filter parameters and the received first signal component as an input.

14. (Currently Amended) A data signal including multi-channel



signal information, the data signal being generated by a method of encoding a multi-channel signal including at least a first signal component and a second signal component, the method comprising the steps-acts of:

[[[]]        determining a set of filter parameters of a prediction filter such that the prediction filter provides an estimate of the second signal component when receiving the first signal component as an input;

controlling the prediction filter by an error signal indicative of a difference of the second signal component and the estimate of the second signal component; and

[[[]]        representing the multi-channel signal as the first signal component and the set of filter parameters.

15. (Currently Amended) A computer-readable medium comprising a data record indicative of multi-channel signal information generated by a method of encoding a multi-channel signal including at least a first signal component and a second signal component, the method comprising the steps-acts of:

[[[]]        determining a set of filter parameters of a

prediction filter such that the prediction filter provides an estimate of the second signal component when receiving the first signal component as an input;

controlling the prediction filter by an error signal indicative of a difference of the second signal component and the estimate of the second signal component; and

[[ - ]] representing the multi-channel signal as the first signal component and the set of filter parameters.

16. (Currently Amended) A device for communicating a multi-channel signal, the device comprising an arrangement for encoding a multi-channel signal including at least a first signal component and a second signal component the arrangement comprising:

[[ - ]] a prediction filter for estimating the second signal component, the prediction filter corresponding to a set of filter parameters and receiving the first signal component as an input, wherein the prediction filter is controlled by an error signal indicative of a difference of the second signal component and an estimate of the second signal component; and

[[ - ]] processing means for representing the multichannel

signal as the first signal component and the set of filter parameters.